

Abdomen.—Terminal segment of spinnerets by far the longest.

Legs.—Patellæ and tibiæ of first and fourth legs almost equal in length. Patella and tibia of second leg equal to the metatarsus of the fourth leg. Metatarsi of anterior legs scopulate for more than half their length; metatarsus of first leg armed below with a large spine and also with a small apical spine. Tibia of first leg armed ventrally and laterally with 7–9 spines, three of which are apical. Metatarsi of third and fourth apically scopulate. Tibiæ and metatarsi of third and fourth legs armed ventrally and laterally with a number of spines. Tarsi of palp and legs furnished dorsally with a number of clavate hairs.

Palp.—Spine of palpal organ long and twisted (fig. 5).

Mandible with stridulatory organ as described above (fig. 2).

Measurements in mm.—Total length of body 15.5; length of carapace 7.75, of first leg (from base of femur) 26, of fourth leg 29, of patella and tibia of first leg 9.5, of patella and tibia of fourth leg 9; of patella, tibia, and tarsus of palp 7.75.

Locality.—A single adult male from the River Ja, in the Cameroons, collected by Mr. G. L. Bates.

Remarks.—A mutilated and immature specimen from the same locality, which seems to belong to an allied species, possesses a well-marked rastellum. The teeth are twelve in number and form a border to the inner edge of the mandible. In the type of *Euphrictus spinosus* they are represented by a number of spiniform setæ.

XLIX.—*Descriptions of new Species of New-Zealand Coleoptera.* By Major T. BROWN, F.E.S.

[Continued from p. 352.]

Group *Feronidæ*.

Trichosternus cwlocephalus, sp. n.

Robust, suboblong, moderately convex, nitid, blackish green, margins metallic green; legs rufo-piceous; the labrum, antennæ, and palpi pitchy red, these last more rufescent, with their tips still paler.

Head moderately large, not as broad as thorax, its sides and occiput appearing quite convex, owing to the whole

central portion, from the middle of the eyes to the base of the labrum, being considerably depressed; eyes prominent, their orbits swollen below and behind; labrum arcuate emarginate. *Thorax* $2\frac{1}{2}$ lines long by $3\frac{1}{2}$ broad; apex obviously incurved, the base less so; widest near the front, moderately rounded near the middle, gradually narrowed towards the acutely rectangular posterior angles; marginal channels wide and a little expanded behind; the dorsal sulcus attains the basal margin, near which it is most conspicuous, there is a curvate frontal impression, the basal fossæ are large. *Elytra* oblong-oval, strongly sinuate apically, humeral angles dentiform and projecting so as to distinctly exceed the base of the thorax in width; they are evidently striate, with fine punctures; the sutural two interstices are plane, the others distinctly convex, all of about equal breadth; the third has four, the seventh five or six large punctures, marginal sculpture coarse.

Underside glossy black, without well-marked sculpture; terminal ventral segment with two setigerous punctures at each side of the middle at the apex. *Legs* normal, external angle of intermediate tibiæ prolonged, so as to cover the basal half of the first tarsal joint.

When compared with *T. antarcticus*, the apical portion of the elytra is seen to be more sinuously narrowed and the humeral angles more prominent; the labrum is more deeply incurved. The most remarkable character, however, which distinguishes this from every other species of *Trichosternus* is the cavity which occupies so large a portion of the head.

♂. Length 12; breadth $4\frac{1}{4}$ lines.

Ashburton. Discovered by Mr. W. W. Smith.

Trichosternus hanmerensis, sp. n.

Suboblong, shining, nigrescent, lateral margins slightly viridi-cupreous; legs, antennæ, and palpi piceo-rufous.

Head smooth, inter-antennal impressions well developed. Eyes large and prominent; genæ simple. *Thorax* $3\frac{1}{4}$ lines in breadth by $2\frac{1}{4}$ in length, widest near the middle, its sides gently rounded, moderately sinuously narrowed behind, posterior angles rectangular, base and apex widely emarginated; disk but little convex and almost smooth, dorsal groove distinct but feeble at apex, basal fossæ large and expanded towards the angles. *Elytra* at the base rather wider than thorax, rather more so at or behind the middle, humeral angles dentiform, sinuously yet only moderately narrowed apically; they are punctate-striate, the punctuation is fine

but distinct; the sutural two interstices plane, the others only moderately convex, all are more or less marked with transverse feeble aciculate impressions, the third has two or three, the seventh five or six setigerous punctures.

Underside glossy black, nearly smooth, only feebly wrinkled, the terminal ventral segment with two setigerous punctures at the extremity at each side of the middle in both sexes; prosternal process unimpressed.

♂ ♀. Length $9\frac{1}{2}$ – $10\frac{1}{4}$; breadth $3\frac{3}{4}$ lines.

Hanmer. Found by Mr. J. H. Lewis.

Obs.—The six individuals under examination exhibit certain variations. In one female the hind body is $4\frac{1}{4}$ lines in width. It would be unwise to separate the series into distinct species at present, so I will simply note varietal forms.

A.—Apical sinuosities deeper, hind body more oviform, no punctures on the third interstices. One male.

B.—Lateral margins and the elytra with rufescent reflections; base of thorax very slightly incurved and scored with fine longitudinal impressions; the thorax itself less curvate laterally, less narrowed, and not at all sinuate behind, the thoracic and humeral angles of almost exactly the same width. One male.

C.—Elytral interstices flatter, punctuation of striæ less distinct; humeral angles evidently broader than basal angles of thorax, which measures $2\frac{1}{4}$ lines in length by $3\frac{1}{4}$ in breadth, its margins slightly rufescent, more strongly rounded laterally, disk uneven, dorsal groove at the middle interrupted by an oviform elevation, basal fossæ irregular, apex with fine longitudinal striæ, some transverse ones near basal fossæ. One damaged female.

Trichosternus ordinarius, sp. n.

Shining, head and thorax coppery green; base and lateral margins of elytra viridescent, disk blackish green; legs piceous, tarsi and basal joints of antennæ piceo-rufous, remaining joints infuscate red; labrum fuscous, with somewhat testaceous margins.

Head (mandibles included) one-third longer than and (eyes included) as broad as thorax; smooth, with moderate frontal impressions. *Thorax* subquadrate, apex evidently incurved, with rounded angles; its sides are only slightly curvate near the front and very gradually but not at all sinuously narrowed towards the rectangular but not projecting posterior angles; the basal fossæ are large and deep, and the marginal channels are widened near the base; the central sulcus is rather broad

and deep at the base and slightly foveiform at its apparent termination near the front, it is, however, prolonged to the front margin as a slender stria, the broad curvate impression near the front is most evident near the angles; the disk is slightly convex and shows traces only of transverse striæ; the base is slightly medially emarginate: it is a fourth broader than long. *Scutellum* striate at base. *Elytra* distinctly broader than thorax at the base, humeral angles evidently dentiform; they are rather wider near the hind thighs than elsewhere and considerably, obliquely, and sinuously narrowed towards the extremity; their striæ are moderately broad and deep and finely punctured; the sutural two interstices are rather narrow, the others broad and convex, the third has three, the seventh five punctures. The *eyes* are prominent. There are two setigerous punctures on each side of the middle of the last ventral segment at the apex in both sexes.

Underside shining piceous, head viridescens.

Female.—Thorax slightly more rounded laterally; hind body broader, particularly near the apex; thorax less cupreous on the middle.

♂. Length $10\frac{1}{2}$; breadth $3\frac{1}{2}$ lines.

Horowhenua Lake. One pair from Mr. G. V. Hudson.

Little difficulty will be experienced in separating this species from *T. cephalotes* or *T. hudsoni*, its nearest allies. The nearly straight-sided thorax, posteriorly attenuated elytra, and more slender legs are distinctive.

Zeopæcilus optandus, sp. n.

Suboblong, slightly convex, nitid, blackish green; thorax brilliant brassy and red, elytral margins rufescent; the legs and basal joints of antennæ piceous; tarsi and palpi piceo-rufous.

Head convex, as broad as front of thorax, feebly irregularly wrinkled; frontal impressions rather short; it is green. *Thorax* one-fourth broader than long, its sides moderately strongly rounded, but with a slight incurvature towards the rectangular posterior angles; discoidal groove and basal fossæ well marked; there is a slight curvate impression near the front, the base and apex bear distinct abbreviated longitudinal striæ, and there are numerous feeble undulating striæ across the disk. *Scutellum* feebly striate. *Elytra* oblong-oval, rather gradually narrowed and only slightly sinuated posteriorly, humeral angles dentiform; their striæ regular, moderately deep, and finely punctured, the interstices mode-

rately convex, slightly undulate behind, all (including the suture) marked with shallow fine punctures.

Underside shining violaceous black, nearly smooth. Terminal ventral segment with one setigerous puncture only at each side of the middle at the apex, as in *Z. putus* and *Z. princeps*.

Posterior *tibiæ* with a stout flexuous calcar; basal joint of the tarsi compressed, broadly grooved underneath, and ridged along the inner side.

Z. princeps (no. 1457) can be distinguished by its red *tibiæ*, *Z. putus* by the dark colour and longer elytra. In *Z. calcaratus* the first joint of the posterior tarsi is not laterally compressed, whilst in *Z. achilles*, which I have not seen, the corresponding joint appears to be dilated inwardly.

♂. Length $10\frac{1}{2}$; breadth $3\frac{3}{4}$ lines.

Nelson. I am indebted to Mr. G. V. Hudson for my specimen.

Pterostichus turgidiceps, sp. n.

Elongate, subdepressed, only slightly nitid, nigrescent; the antennæ and tarsi piceo-rufous; palpi infusate red.

Head (mandibles included) one-fifth longer than thorax, nearly as broad as that is; the genæ and ocular orbits swollen, the former nearly straight from the base of the mandibles to behind the eyes; ocular carinæ simple, the two frontal impressions moderate, the surface smooth; there are two setigerous punctures near each eye and two on the forehead; on the labrum there are six; both forehead and labrum are widely incurved in front. *Mandibles* very thick, rather long, and slightly curved at the extremity. *Eyes* rather small, not flat, yet not at all prominent. Antennæ with yellow pubescence from the fourth joint onwards; the first three and the base of fourth are glabrous. *Thorax* almost as long as broad, apex very slightly emarginate, with obtuse and not in the least prominent angles; the base somewhat obliquely emarginate towards the middle; lateral margins simple but well developed, of equal thickness throughout, with four setigerous punctures at each side; it is widest near the front and gradually narrowed, but not perceptibly sinuate, towards the rectangular but not acute posterior angles in the female: in the male the posterior sinuosity is evident, so that the angles appear slightly projecting though not acute, its sides are gently rounded but not as broad in front as in the female; disk rather flat, the central groove not abbreviated, basal

fossæ rather longer than broad and situate nearer the sides than to the middle; there is a feeble curvate frontal impression. *Scutellum* slightly striate at base. *Elytra* a little longer than the head and thorax combined, suboblong, rather wider behind than at the base, where they barely exceed the thorax in breadth; humeral angles obtusely dentiform, posterior sinuosities oblique but not deep, apices quite obtusely rounded, lateral margins well developed; the dorsum flat; each elytron with eight very finely punctured striæ; interstices moderately broad, the third and fifth with five or six, the seventh with eight or nine conspicuous punctures, the sides with coarse serial punctures.

Legs moderately long, thick, femora dilated.

Male.—*Tarsi*: anterior with the basal three joints strongly dilated and cordiform, with grey spongy squamæ, and fringed with ferruginous setæ underneath; their fourth joint also cordate; the posterior rather short, basal articulation rather longer than second, the basal four intermediate between cordate and triangular, the terminal somewhat thickened towards the extremity.

Female.—*Labrum* so much abbreviated that its punctured apex only is visible, so that the trophi are quite exposed between the open mandibles. Front tarsi with subcordate intermediate joints, the basal and terminal of nearly equal length. Size $8 \times 2\frac{1}{2}$ lines.

Mentum tooth bifid. Basal ventral segment almost wholly concealed. Both sexes with two setigerous punctures on each side of the middle, at the extremity, of the last ventral segment.

♂. Length $9\frac{1}{2}$; breadth $2\frac{3}{4}$ lines.

Manawatu Gorge. One of each sex, discovered on different occasions, by Mr. W. W. Smith.

Obs.—Certainly a very curious species. The structure quite Pterostichoid. The legs are thick, like those of an African *Anthia*. The thorax of the female resembles that of a North-American *Holciophorus* in shape. The elytra are somewhat like an Australian *Homalosoma*. The swelled head is considered a colonial characteristic and is like that of our *Trichosternus planiusculus*.

Pterostichus odontellus, sp. n.

Elongate-oblong, moderately convex, brilliant and intensely black; legs piceous; tarsi, antennæ, and labrum piceo-rufous, palpi paler.

Head nearly as wide as thorax, the forehead a little uneven

and depressed, with several fine longitudinal rugæ near the eyes; the common frontal impressions are ill-defined and appear to form part of the depression between the antennæ. *Eyes* large and prominent, their orbits somewhat swollen. *Labrum* large, truncate, with six setigerous punctures. *Thorax* $2\frac{1}{4}$ lines in breadth by $1\frac{3}{4}$ in length; base and apex slightly emarginate; widest at the middle, its sides only moderately rounded, more narrowed towards the base than it is in front, with an almost imperceptible sinuosity near the subacute posterior angles; anterior angles rounded, the marginal channels of equal width throughout; discoidal furrow deep, distinctly abbreviated in front, basal fossæ large and elongate; its surface uneven but without well-defined impressions. *Scutellum* scored at base. *Elytra* suboblong, slightly wider behind than at the base, but sinuously narrowed apically; they are evidently striate, the eighth striæ are punctate, the sculpture of the discoidal striæ, however, is ill-defined, seeming to consist of shallow elongate impressions with slight intervals, some of these appear to encroach on the interstices.

Underside shining black, bipunctate at each side of the middle, at the apex, of the last ventral segment. Prosternal process broadly and deeply furrowed along its whole length.

Legs stout; the intermediate femora strongly inflated, the anterior and posterior remarkably so, being quite bulbous underneath, the hind trochanters very thick and cylindric; tibiæ stout, the hind pair with a small tooth on the inner edge near the middle. Anterior tarsi with coarse brush-like soles; the basal four joints cordiform, the first three more expanded than the fourth, the basal two appear as if their outer angles were slightly prominent.

Antennæ pubescent from the fourth joint onwards, they attain the base of the thorax; second joint more than half the length of the third; the basal joint is stout and cylindric and bears a distinct flattened tubercle close to its upper extremity and an upstanding seta at the inner side of the tubercle.

♂. Length 8; breadth $2\frac{1}{2}$ lines.

Taranaki.

Mr. W. W. Smith, who seems to possess the knack of finding curious Carabidæ, gave me his unique specimen without mentioning the locality; but I believe he found it near Mount Egmont.

Obs.—This conspicuous beetle is of special interest. The remarkable femora, the denticles on the posterior tibiæ and on the basal joints of the antennæ are without precedent. The dilated joints of the front tarsi, though unsymmetrical,

are not sufficiently so for generic separation from *Pterostichus*. It must be located in the section having four or more setigerous punctures on each side of the thorax.

Pterostichus antennalis, sp. n.

Elongate, slightly convex, black; the legs and basal three joints of the antennæ piceous, remaining joints pale castaneous.

Head about as broad as front of thorax, very finely and irregularly wrinkled, frontal impressions elongate; eyes only moderately prominent, their orbits a good deal dilated below and behind. *Thorax* 5 mm. long by $5\frac{1}{2}$ broad, moderately incurved medially at base and apex, anterior angles rounded, its sides but little curved, and gradually slightly narrowed behind; the posterior angles, owing to the thickening of the margins, appear minutely prominent; its surface very finely transversely striate, the base and apex longitudinally, discoidal groove well marked and almost touching the apex, basal fossæ rather elongate, and with a second smaller almost sulciform one nearer each side, the space between each of these latter and the lateral margin seems convex but not cariniform. *Scutellum* striate at base. *Elytra* elongate, oblong, but little rounded laterally, distinctly sinuated behind, humeral angles moderately dentiform and but little wider than the base of thorax; each elytron with seven more or less interrupted striæ, all well marked at the base, the inner four rather more regular and finer than either of the next two, each consists of about twenty punctures or elongate impressions, the seventh is made up of about twenty or more rather fine punctures between the shoulder and posterior sinuosity.

Femora medially dilated, the posterior strongly angulate, so that the trochanter fits into the slender basal portion. There are four setigerous punctures on each side of the thorax and at the apex of the last ventral segment.

The terminal four joints of the *antennæ* are rufo-castaneous, with a piceous central streak, which is broadly grooved, sometimes with a slender carina, and this dark longitudinal space is marked off by the entire absence of the pubescence which is so conspicuous on all but the basal three. This peculiarity occurs amongst the allied species, but I have not seen any record of it.

In *P. lewisi* the elytral striæ are almost entirely made up of elongated impressions, the seventh has only about seven or ten; two of these grooves sometimes occupy the whole space between the hind thigh and subapical sinuosity. In the

present species the seventh striæ consist of a combination of over twenty rather fine punctures and impressions. This will enable the student to distinguish the species.

♂. Length $8\frac{1}{2}$ -9; breadth $2\frac{3}{4}$ -3 lines.

Takuratahi and Mount Holdsworth. Two males from Mr. G. V. Hudson's collection.

Pterostichus oneroaensis, sp. n.

Black, glossy; tibiæ and antennæ nigro-piceous; tarsi rufo-piceous; labrum and mandibles also black.

The description of *P. sandageri* (no. 1776) applies exactly to this, with the following exceptions:—

The elytral interstices are transversely marked with aciculate impressions and the two large punctures on the third are absent. The prosternal process is broadly grooved and the metasternum is similarly impressed longitudinally. The legs are more robust, the intermediate femora are much swollen underneath, so as to appear more emarginate towards the apex; the tibiæ of the same pair have their hind or outer angles produced as a stout spiniform process. This last character, however, is also present in *P. sandageri*.

There are two setigerous punctures on each side of the thorax—one before the middle, the other at the hind angle—and the same number at each side of the middle, at the apex, of the last ventral segment. It belongs to the *Trichosternus*-like section (see Mau. N. Z. Coleopt. p. 986).

♂. Length $12\frac{1}{2}$; breadth 4 lines.

The Oneroa (Mr. P. Seymour); Invercargill (Mr. G. V. Hudson). One specimen from each.

Pterostichus flectipes, sp. n.

Suboblong, moderately convex, shining cupreous black; legs and antennæ picous.

Head convex, frontal impressions distinct, and with a series of fine longitudinal interocular striæ. Thorax 3 lines in width by $2\frac{1}{4}$ in length, base and apex much incurved, widest near the middle, moderately curved forwards, narrowed and slightly sinuate towards the rectangular posterior angles, marginal channels of almost equal width throughout; median groove distinct from base to apex, basal fossæ large; across the disk there are several feeble aciculate impressions. Scutellum striate. Elytra oblong-oval, shoulders dentiform but not prominent; with finely punctured striæ; interstices slightly convex, the third with two, the seventh with five punctures.

Legs stout, femora but little inflated; intermediate tibiæ truncate at extremity, the posterior much bent throughout their whole length, the terminal calcar rather stout and nearly as long as the first tarsal joint.

Underside glossy black, metasternum and ventral segments finely irregularly wrinkled, last segment bipunctate at each side of the extremity, the prosternum apparently smooth, flanks of mesosternum minutely coriaceous.

Belongs to the *Trichosternus*-like section, with one setigerous puncture at each hind angle of the thorax and another before the middle. In some respects like *P. meliusculus* (1637), but smaller, the hind body more decidedly oviform, humeral angles less dentiform, basal region of thorax not medially depressed, punctuation of elytral striæ more distinct. It may be separated from all the members of this section by the remarkably formed posterior tibiæ.

♂. Length $9\frac{1}{2}$; breadth $3\frac{1}{4}$ lines.

South Island.

One of Commander J. J. Walker's captures; exact locality unknown, probably Westport.

Pterostichus adoxus, sp. n.

Suboblong, subdepressed, nitid, pitchy black; elytra very slightly æneous and their margins rufescent behind; legs picco-rufous, the palpi, antennæ, and tarsi paler red.

Head smooth, with simple, small, and shallow frontal foveæ and a shallow impression on the middle of the vertex; including the large prominent eyes, it is quite as wide as front of thorax; there are two setigerous punctures close to each eye, and the same number on the forehead. Antennæ with the basal three joints nude, third joint as long as fourth and a fourth longer than second, they attain the middle femora. *Thorax* slightly wider before the middle than elsewhere, moderately rounded and margined, widely but not deeply sinuate, angustate behind, posterior angles rectangular, base and apex subtruncate; it is a little convex and just a fifth broader than long; the well-marked central groove extends from base to apex; basal fossæ large, elongate, and extending as a flattened space to each hind angle, they are finely punctate. *Scutellum* obsoletely sculptured. *Elytra* oblong-oval, with rounded and not dentiform humeral angles, lateral margins well developed, moderately narrowed, but hardly at all sinuate posteriorly; each has a scutellar and seven well-marked discoidal striæ, all impunctate; the sutural striæ on each is bent at the apex and prolonged forwards

along the lateral margins; interstices nearly plane, the third tripunctate.

The tips of the palpi are very slightly obtuse. The basal three articulations of the front tarsi in the male are appreciably less dilated than in *Haptoderus maorinus* (88) and *sharpianus*. The latter is the nearest ally known to me, but its thorax is broader, more rounded, its hind angles are less acutely rectangular, and the fossæ less evidently (sometimes not at all) punctured, and there are no interstitial punctures on the elytra. The two hind pairs of tarsi are similarly grooved, and all three species have one seta on each side of the thorax before the middle and another at the hind angle.

♂. Length 4; breadth $1\frac{2}{3}$ line.

Manawatu Gorge. One male, secured by Mr. W. W. Smith.

Pterostichus oxymelus, sp. n.

Oblong, medially narrowed, slightly convex, brilliant black; tarsi and basal four joints of antennæ rufo-piceous, remaining joints rufo fuscous; palpi shining, rufo-piceous, with fulvescent tips.

Head large, as long as thorax, and (eyes included) nearly as broad as that is; frontal impressions elongate and deep, more or less finely wrinkled; eyes prominent; labrum obliquely emarginate. *Thorax* widest before the middle, moderately rounded, a good deal curvedly narrowed and slightly sinuate behind; posterior angles rectangular, slightly incrassate and prominent, the anterior rounded; apex and base widely incurved, the latter subtruncate near each side; discoidal furrow deeply impressed and a little expanded towards the extremities, but not reaching the apex; basal fossæ longer than broad, well developed, situate nearer the sides than the middle; there are a few fine longitudinal striæ near the middle of the base and apex, but no perceptible ones across the disk; it is only an eighth broader than long. *Scutellum* deeply striate at base. *Elytra* oblong-oval, shoulders rather narrow and not dentiform; they are only moderately narrowed and rounded and only slightly sinuate behind; they are slightly convex, their striæ are moderately deep and finely punctured, but some become a little irregular and interrupted towards the extremity.

Legs robust; femora strongly dilated, posterior angulate below; front and middle tibiæ incrassate near extremity, the posterior flexuous, strongly and acutely prolonged at the inner extremity, the two apical spines unequal and elongate, both bent backwards.

When compared with *P. mucronatus* (1468), *P. oxymelus* appears to have stouter legs, the mandibles are evidently obliquely striate; the eyes are more convex and prominent, but their orbits are less swollen; the elytral striæ are more regular and less interrupted, the shoulders are not at all prominent, the posterior contraction is less abrupt and deep; the apical spines of the four hind tibiæ are directed backwards instead of forwards, as they are in *P. mucronatus*; the basal three joints of the front tarsi are less expanded and the second and third are foveate above near the base.

There are four setigerous punctures on each side of the thorax, but only one at each side of the middle at the extremity of the terminal ventral segment.

♂. Length $7\frac{1}{2}$; breadth $2\frac{1}{8}$ lines.

Manawatu Gorge. One, found by Mr. W. W. Smith.

Pterostichus sinuiventris, sp. n.

Intense black, glossy; the palpi, tarsi, and basal four joints of antennæ rufo-piceous, tips of palpi fulvescent.

Head almost smooth, with elongate frontal foveæ; mandibles obliquely striate; labrum obliquely emarginate. *Eyes* convex and prominent, their orbits not swollen. *Thorax* one-seventh broader than long, widest before the middle, gently rounded, moderately sinuate-angustate behind, posterior angles rectangular and slightly projecting; apex widely, the base medially, incurved; basal fossæ large and elongate, central furrow broad and deep but not reaching the apex. *Scutellum* deeply striate at base. *Elytra* oblong-oval, humeral angles slightly projecting, posterior sinuosities rather deep and abrupt, the apex, however, rather broad and obtusely rounded; they are rather deep and finely punctate, regular, but becoming confused near the extremity; interstices smooth and moderately convex.

Legs stout, femora dilated; posterior tibiæ slightly flexuous, not prolonged at the inner extremity.

Female.—Terminal ventral segment near each side of the apex obliquely truncate towards the middle, which is angulate and somewhat prominent, the whole apex distinctly margined and with a fine groove parallel with the margin, and bearing two setigerous punctures near each side, as in the male. Flanks of the sternum finely punctate or rugose. The head and thorax more or less finely transversely striate.

Similar to *P. oxymelus*, but lacking the essential character of that species, *i. e.* the acute prolongation of the posterior tibiæ. The elytral striæ deeper and regular. The thorax

more sinuate behind and with more prominent angles. The shoulders more dentiform and the claws of the front tarsi thicker. There are four setæ on each side of the thorax.

♂. Length $6\frac{1}{2}$; breadth $2\frac{1}{3}$ lines.

Manawatu Flats, 9 miles below the Gorge. One male and three females, collected by Mr. W. W. Smith and Mr. Frank Park.

Pterostichus vexatus, sp. n.

Elongate, glossy black; legs and basal four joints of antennæ piceous; palpi and tarsi piceo-rufous.

Head moderately large and (including the prominent eyes) as wide as front of thorax; frontal impressions elongate, mandibles finely wrinkled, labrum emarginate. *Thorax* subquadrate, its sides being only slightly rounded, and a little narrowed but not sinuate behind; posterior angles rectangular, apex widely, base medially incurved; disk very slightly convex, median furrow well marked, rather deep and broad at extremities, but not attaining the base or apex; basal fossæ not very large, well defined, distinctly separated from the sides, the curved frontal impression very feebly marked; it is only an eighth broader than long. *Scutellum* striate at base. *Elytra* oblong, slightly rounded, rather abruptly sinuate-angustate near the apices, humeral angles not dentiform and but little wider than the thoracic angles; disk subdepressed, their striæ irregularly interrupted, some of the punctures large and distant, those of the intermediate especially, sixth and seventh rather more regularly striate-punctate.

Legs stout, posterior femora dilated, angulate and subdentate below, so that the trochanters exactly fit into the narrow basal portion.

Male with one setigerous puncture each side of the middle, but rather far apart, at the apex of the last ventral segment; the female with two. Anterior tarsi with the basal two joints of the male slightly but appreciably prolonged at the outer angle.

Belongs to the section having four setæ on both sides of the thorax, and most nearly allied to *P. obsoletus*, which, however, has a more posteriorly narrowed and slightly sinuated thorax and evidently shorter elytra. In both species the hind tibiæ are slightly curvate, but *P. vexatus* is larger and has stouter legs. *P. ithaginis* is also somewhat similar, but its thorax is more narrowed behind and the clytral striæ are much less interrupted. *P. præcox*, also from Wellington,

has its thorax more narrowed basally, with larger fossæ and differently sculptured elytra. These are the only species with which it may be confounded.

♂. Length $7\frac{1}{2}$; breadth $2\frac{1}{4}$ lines.

Wellington. One pair from Mr. J. H. Lewis.

Pterostichus perbonus, sp. n.

Oblong, moderately elongate and convex, nitid, black; legs and antennæ picco-rufous.

Head (including the prominent eyes) rather narrower than thorax, the elongate frontal impressions well marked. *Thorax* $2\frac{1}{4}$ lines broad by $1\frac{3}{4}$ long, base and apex incurved, slightly wider before the middle than it is elsewhere, a little narrower behind than in front, its sides very gently and regularly rounded, and without any sinuosity whatever; lateral margins well developed, posterior angles quite obsolete; dorsal groove abbreviated, the curvate frontal impression feeble; basal fossæ simple, not long, situated nearer the sides than the middle; usually with feeble linear impressions across the disk. *Scutellum* striate at base. *Elytra* a little wider than thorax, oblong-oval, their shoulders rather narrow, rounded, and not at all dentiform, only slightly sinuate apically; their striæ are deep, regular, and not perceptibly punctured; interstices generally with many feeble aciculate impressions across them, the third sometimes tripunctate; the scutellar striæ short but deep.

Legs normal, posterior femora dilated and subangulate.

Underside glossy black, flanks of prosternum feebly wrinkled, mesosternum punctate. Terminal ventral segment bipunctate at each side of the middle at the apex in both sexes.

P. ovatellus, Chaudoir, is no doubt the nearest species, but in it the elytral striæ are punctured. There are only two setæ on each side of the thorax.

♂. Length $7\frac{1}{2}$; breadth $2\frac{1}{2}$ lines.

Westport.

Commander J. J. Walker, R.N., gave me a pair bearing the number 5240.

Pterostichus philpotti, sp. n.

Subparallel, elongate, moderately convex, glossy black; legs and antennæ rufo-piceous, terminal joints of the palpi rufo-castaneous.

Head smooth, with rather feeble frontal impressions; mandibles distinctly wrinkled; eyes large and prominent.

Thorax $1\frac{3}{4}$ lines in length and breadth, slightly wider near the front than it is behind, its sides very slightly curved, margins well developed; the base medially incurved and slightly obliquely rounded towards each side, so that the angles are obsolete, the apex subtruncate or just perceptibly emarginate; disk smooth, central groove distinct but not attaining the apex; basal fossæ large and well defined, placed nearer the sides than the middle. *Scutellum* striate at base. *Elytra* elongate, very little wider than thorax, subparallel, shoulders somewhat curvedly narrowed, so as to scarcely exceed the base of thorax in width, rather broad at the extremity, and with only a short situation near it; the striæ are not deep, they are somewhat confused near the apex and are finely punctured, the punctuation of the third and fourth sometimes effaced, seventh indistinct, the punctures near the lateral margins rather large and distinctly separated; interstices but little convex, with two punctures on the third behind the middle.

Legs stout; posterior femora not angulate below; intermediate tibiæ slightly dilated along the inner face.

There are four setæ along each side of the thorax; there are no scutellar striolæ.

Of peculiarly elongate subparallel outline. Like *P. inconstans*, but differing from it in the darker legs, absence of catenulate elytral sculpture, and by the deeply striate scutellum, &c.

♂. Length 7; breadth 2 lines.

West Plains, Invercargill.

One pair from Mr. A. Philpott, whose name it bears.

Pterostichus lepidulus, sp. n.

Subdepressed, elongate, moderately shining, black; legs piceous, the front tarsi and last seven joints of antennæ rufous; the basal four joints of the latter, the palpi, and mandibles pitchy red.

Head nearly as long and (including the very prominent eyes) as broad as thorax, with fine oblique rugæ near each eye, frontal impressions not elongate; labrum widely emarginate. *Antennæ* reach backwards to base of thorax, fourth joint very slightly longer than third. *Thorax* widest near the middle, moderately rounded, gradually narrowed behind, posterior angles rectangular, base medially incurved, apex slightly emarginate, it is one-fourth broader than long; disk nearly flat, basal fossæ elongate, sulciform, situated halfway between the middle and sides, dorsal furrow well marked but

not reaching the front margin. *Scutellum* finely striate. *Elytra* oblong, humeral angles rounded and not dentiform, moderately curvedly narrowed, but hardly at all sinuate posteriorly; they are nearly plane, and have finely and closely punctured but not deep striæ; interstices rather flat, the third tripunctate; the marginal sculpture well marked, the seventh striæ very fine.

The mandibles are rather short, but strongly curved and acute at the extremity. Femora simple. Thorax bisetose at the sides, last ventral segment also.

P. oscillator, Sharp, is certainly the nearest ally. This species differs in having more shallow, but distinctly though finely punctured elytral striæ, scored scutellum, &c. In my specimen of *P. oscillator* the lower sides of the head, between the eyes and middle of mandibles, are expanded and rufescent, and in this respect resemble the Antarctic genus *Loxomerus*. In *P. lepidulus* the dilatation is normal and does not extend beyond the base of the mandibles.

♂. Length 6; breadth 2 lines.

West Plains, Invercargill. A single specimen from Mr. A. Philpott.

Pterostichus chalmeri, sp. n.

Elongate-oblong, glossy black; the legs and basal four joints of antennæ rufo-piceous, remaining joints infuscate red; tarsi and palpi piceo-rufous.

Head (eyes inclusive) rather narrower than front of thorax, frontal foveæ short, not extending backwards to the eyes; labrum large, widely incurved; eyes moderately prominent. *Thorax* a fourth broader than long, widest before the middle, moderately rounded, a good deal narrowed backwards, posterior angles rectangular, the anterior rounded, apex widely but slightly incurved; base subtruncate, being only a little emarginate at the middle; disk slightly convex, with feeble yet quite perceptible transverse striæ, the curvate frontal impression shallow; basal fossæ broad, with a second smaller outer fovea united to each; discoidal furrow distinct but not attaining the apical margin. *Scutellum* deeply striate at base. *Elytra* oblong; humeral angles obtusely dentiform; they are but little narrowed and only slightly sinuate posteriorly; they are distinctly and regularly punctate-striate, the striæ are deep but not distinctly punctured at the base, the marginal punctures are well marked; interstices slightly convex, simple.

Legs stout, hind thighs angulate and minutely dentiform

underneath; basal three joints of anterior tarsi rather broadly expanded. There are two setæ on both sides of the thorax, but only one at each side of the terminal ventral segment.

P. thoracicus (1148) may be at once separated by its more finely punctured and sharply impressed elytral striæ, less transverse thorax, with the duplicate basal and smaller foveæ distinctly marked off from the larger ones, and by the more sinuate and narrower elytral apices. *P. placidus* (1150) is distinguished by its more prominent thoracic angles; its basal fossæ are similar, but the punctuation of the elytral striæ is finer and the apical portion of the hind body is narrower; the scutellum is longitudinally scored to its apex. The third interstice is only indistinctly bent forwards and elevated near the apex, so that the oblique cariniform elevation seen in the two species cited is less conspicuous in *P. chalmeri*, in which, moreover, the head is not constricted behind the eyes.

♂. Length 6; breadth $2\frac{1}{8}$ lines.

Dunedin. One, sent by Mr. T. Chalmers, formerly an assiduous collector of Coleoptera in Otago.

Group Bembidiidæ.

Tachys coriaceus, sp. n.

Shining, slightly convex, rufo-testaceous; the greater portion of elytra (except the suture and apex) infusate; legs testaceous; tarsi, palpi, and antennæ pale yellow.

Head narrowed anteriorly; frontal impressions elongate, extending from back of eyes to apex, they are deep and broad and finely transversely sculptured; a fine lateral carina proceeds from the back part to each antenna. *Eyes* very small. The *antennæ* reach backwards to the base of thorax and bear slender grey setæ; basal two articulations stout, cylindrical, and of nearly equal length; joints 3-8 longer than broad, subovate, but a little narrowed towards the base, tenth evidently shorter, eleventh as long as but rather stouter than third, with three apical setæ, the central one distinct. *Thorax* transverse, with well-defined lateral margins, base and apex subtruncate, its sides rounded, more strongly in front than behind, the margins minutely thickened behind, but without forming distinct angles there; basal foveæ small, dorsal groove abbreviated; it has a few minute setigerous punctures, one seta at each side, before the middle, is most conspicuous. *Elytra* oval, of about equal width at base and apex, distinctly margined, estriate, with a few minute indistinct punctures,

each of which has a fine grey seta; their whole surface densely and very minutely sculptured.

Legs elongate, yet not very slender; anterior tarsi not dilated. Palpi stout, penultimate articulation straight externally, slightly rounded inwardly.

From *T. latipennis*, Sharp, the thoracic angles at once differentiate it. It is most nearly allied to *T. oreobius*, but the broader form, evidently more transverse thorax, with more rounded anterior angles and more distinct lateral margins, distinguish it therefrom. The head also differs; in *T. oreobius* the frontal impressions are most obviously separated by the apparently raised central space, but in *T. coriarius* the space between the side and each fovea appears most distinct.

♀. Length $\frac{7}{8}$; breadth $\frac{3}{8}$ line.

Otira Gorge. One female, discovered by Mr. J. H. Lewis.

Drury, Auckland, N.Z.,
26th May, 1908.

L.—*On the Animals of Genera and Species of Mascarene Land-Mollusca belonging to the Family Zonitidæ, collected by Monsieur E. Dupont. By Lt.-Col. H. H. GODWIN-AUSTEN, F.R.S. &c.*

[Plates IX.—XI.]

ON commencing this paper I must convey my best thanks to Monsieur E. Dupont for collecting so carefully and sending me so much valuable material to examine and describe. I have also to thank Mr. John Ponsonby for supplying me with some species obtained in the first instance by the same conchologist. As the first consignment was received as far back as 1906, I have to regret the long delay in its publication. With regard to the animals of Mascarene land-shells I find not many have been described.

Messrs. Thomas Bland and W. G. Binney, in the 'Proceedings of the Academy of Natural Sciences of Philadelphia,' vol. xxvi. 1874, p. 47, describe the anatomy of some Mauritian land-shells belonging to the genus *Gonospira*, and of others with which I am more interested belonging to the Zonitidæ and placed in Gray's genus *Nanina*. "Such are *N. caldwelli*, Bs.; *N. rawsonis*, Borelay, = *semicerina*, Morelet; *N. argentea*, Rve.; *N. implicata*, Nevill; *N. styloidon*, Pfr., put in *Helix (Erepta)* by Von Martens."